UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,052	05/03/2001	Masoud Motamedi	41874/RRT/T442	5569

			EXAMINER
23363	7590	03/25/2005	JONES, HUGH M

CHRISTIE, PARKER & HALE, LLP
PO BOX 7068
PASADENA, CA 91109-7068

ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/848,052	MOTAMEDI ET AL.
	Examiner	Art Unit	
	Hugh Jones	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>03 May 2001</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-31* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-31* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-31 of U.S. Application 09/848,052, filed 05/03/2001 are presented for

examination.

Claim Objections

2.   Claims 4 and 24 are objected to because of the following informalities: There

appear to be a number of minor grammatical errors. In particular, indefinite articles are

lacking. For example, "extracting number of radials" should be "extracting a number of

radials". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

4.   Claims 1-31 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Lin.

5.   Lin discloses:

A method/apparatus/system for analyzing performance wireless location system

comprising the steps of:

storing data related location equipment, wireless infrastructure, handsets, terrain

map, and morphology map (fig. 5, 7);

generating radial file for path loss and time/angle error based on the stored terrain and morphology maps (fig. 5-7);

computing a multi-site forward and a multi-site reverse link signal strength map for determining coverage of the location system (fig. 5, # 40, fig. 6, fig. 7);

generating a multi-site margin/error map from the computed multi-site forward and reverse link signal strength map and the stored data (fig. 6, 7);

generating a location error estimate map from covariance at each point in the margin/error map (fig. 6); and

generating an error estimate map for the location system (fig. 6);

displaying the generated error estimate map (fig. 6 and fig. 5, # 40);

storing the generated error estimate data (fig. 6);

wherein the step of generating a site radial file for path loss and time/angle error comprises the steps of:

extracting a number of radials per each sector of the site (fig. 7, # 321-322);

extracting number of points for each radial (fig. 7, # 321-322);

computing 4/3 earth altitudes (this is line of sight to the horizon, fig. 7, # 325);

computing propagation model to generate a path loss (fig. 7, # 325)

including effects of diffraction and antenna height (fig. 7, # 325);

computing loss due to antenna pattern (fig. 7, # 325); and

computing angle/time errors (fig. 5).

wherein the multi-site map for path loss includes at each point, path loss for the best wireless server and error data for a site with highest received signals (fig. 7, # 322).

further comprising the step of converting the generated radial file a cluster map
for path loss and time/angle error (fig. 5).

wherein the step of converting comprises the steps of:

determining a box map dimensions fit the radial signal generating signal map

entry for each latitude and longitude in the box map (fig. 5, # 313-314); and

storing path loss and error in box map (fig. 5-6).

Wherein the step of computing a multi-site forward and a reverse link strength

map comprises the steps of

invoking stored terrain information (fig. 7, # 321, 323, 325);

selecting stored propagation model from a plurality of stored propagation models;

computing a forward link propagation loss (fig. 7, # 325); and

determining a likely server for a given location (fig. 7, # 322).

wherein the step of computing reverse link signal strength map (fig. 7)

further comprising the step of computing a multi-site RX power map (fig. 7).

wherein the step of computing a multi-site RX power map comprises the steps of:

using a window of received signal strength on the reverse for setting a mobile unit's

transmit power (fig. 7);

generating the mobile unit Tx power map (fig. 7); and

using the generated mobile unit Tx power map for generating a multi-site RX

power map (fig. 7).

wherein the step of computing multi-site forward and a reverse link signal

strength map comprises the step of selecting a location determination algorithm from a

plurality of stored location determination algorithms, wherein inputs to the selected

location determination algorithm includes one or more of terrain information, location

and heights of mobile receiver; location and heights of fixed receiver, land use, major

road structures, and peculiar obstacles defined in the area (fig. 7).

wherein the wireless infrastructure includes one or more of location system type,

location system name; type; location receivers' antenna category; location system

antenna locations; antenna type; number of antenna units at a given installation;

location system antenna elevation; location system antenna height; and cabling losses

(fig. 7).

wherein the wireless infrastructure includes one or more of air interface type; cell

site locations; site elevation; site height; Number of sectors; antenna gain TX and RX;

downtilt; number of channels; control/signaling and voice channel assignments; transmit

powers; and power control window upper and lower limits (fig. 7).

editing the stored morphology map (fig. 7).

further comprising the steps of reading, maintaining, and displaying one more of

interstate roads, major roads, and secondary roads (fig. 7).

further comprising the step of performing sensitivity analysis by adjusting a

parameter (fig. 5).

further comprising the steps of generating an output in form of one or more of

average errors, RMS errors, number and identity location receivers, and coverage

availability (fig. 5).

further comprising the step of storing database information specific to location

technology including one or more of type of technology; antenna types; receiver

sensitivities data; receiver noise data; receiver bandwidth; integration time; known

receiver biases; receiver jitter; transfer function; presence of quality indicator's at

receiver or receiver type; and quality indicators computation (fig. 7).

6.   **Any inquiry concerning this communication or earlier communications**

from the examiner should be:

directed to:

Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to

0700 ET, *or* the examiner's supervisor, Kevin Teska, telephone number (703)

305-9704. Any inquiry of a general nature or relating to the status of this

application should be directed to the Group receptionist, telephone number (703)

305-3900.

mailed to: Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 308-9051 (for formal communications intended for entry) *or*

(703) 308-1396 (for informal or draft communications, please label

"*PROPOSED*" or "*DRAFT*").

Dr. Hugh Jones

Primary Patent Examiner

March 19, 2005